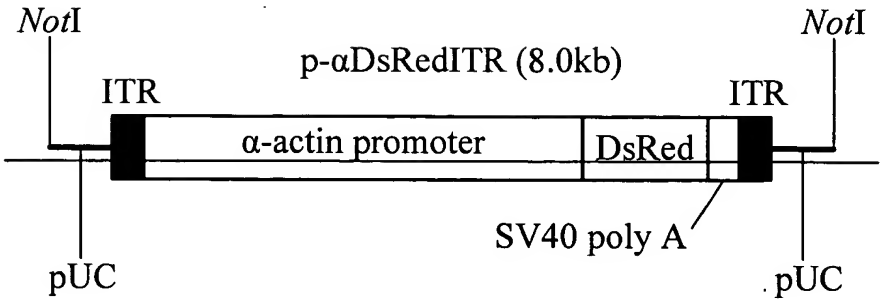
AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (CURRENTLY AMENDED) A gene fragment comprising, in an upstream to downstream order the operatively linked regions (1) first inverted terminal repeats (ITR) of adeno-associated virus; (2) an α-actin gene promoter of golden zebrafish; [[(2)]] (3) a gene encoding a red fluorescence gene product; (4) SV40 poly A and [[(3)]] (5) second inverted terminal repeats (ITR) of adeno-associated virus~~; and (4) a basic part from pUC~~.

2. (CURRENTLY AMENDED) The gene fragment of Claim 1 further comprising ~~which is~~ a first pUC backbone segment operatively linked to and upstream of the first inverted terminal repeats and a second pUC backbone segment operatively linked to and downstream of the second inverted terminal repeats and wherein the gene encoding the red fluorescence gene product is DsRed



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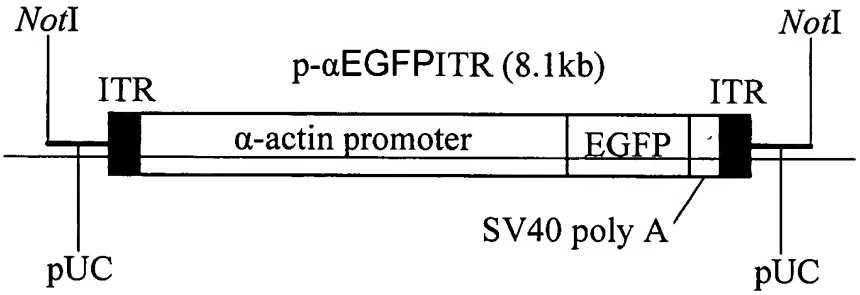


3. (CURRENTLY AMENDED) A method of producing an adult golden zebrafish with systemic red fluorescence comprising:

(a) constructing a plasmid including a first ITR, a CMV promoter, a gene encoding a fluorescent gene product, S40 poly A and a second ITR;

(b) replacing the CMV promoter with an α-actin gene promoter of golden zebrafish to produce a new plasmid construct in which the α-actin gene promoter is operably linked to the gene encoding a fluorescent gene product;

(c) linearizing the new plasmid construct;

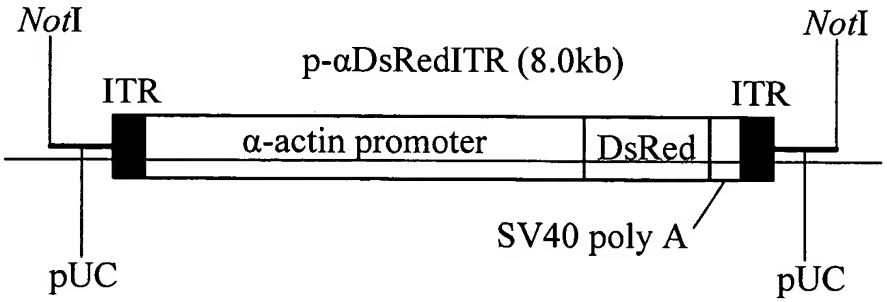
(d) microinjecting the linearized new plasmid construct into fertilized golden zebrafish eggs ~~of golden zebrafish~~ to obtain microinjected eggs;

(e) incubating the microinjected eggs for at least 24 hours to form embryos;

(f) selecting ~~incubated~~ an embryo ~~eggs~~ exhibiting red fluorescence; and

[[(f)]] (g) cultivating the selected embryo~~eggs~~ to maturity to produce an adult golden zebrafish having skeletal muscle that exhibits red fluorescence.

4. (CURRENTLY AMENDED) The method of Claim 3 wherein the linearized plasmid ~~is~~consists of, in upstream to downstream order, operably linked regions designated as a first pUC backbone segment, a first ITR, an α-actin gene promoter for golden zebrafish, a gene encoding a red fluorescent gene product, SV40 Poly A, a second ITR, and a second pUC backbone segment



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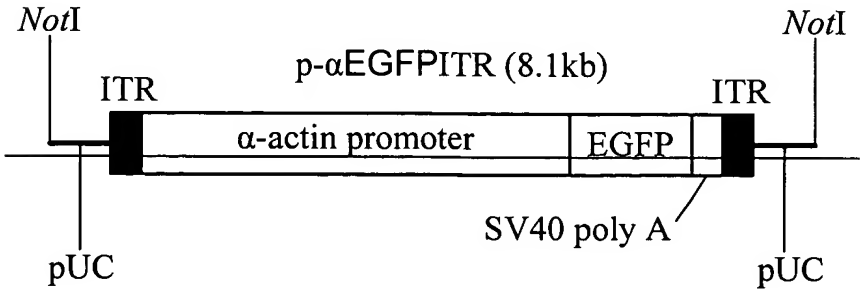

5. (CURRENTLY AMENDED) The method of Claim 3 wherein the gene encoding the red fluorescent gene product is ~~a red fluorescent gene from p~~DsRed~~2-1~~.

6. (CANCELED)

7. (CURRENTLY AMENDED) [[A]] An adult golden zebrafish having skeletal muscle that exhibits systemic red fluorescence produced according to the method of Claim 3.

8. (CURRENTLY AMENDED) The adult golden zebrafish of Claim 7 wherein the linearized plasmid consists of, in upstream to downstream order, operably linked regions designated as a first pUC backbone segment, a first ITR, an α-actin gene promoter for golden zebrafish, a gene encoding a red fluorescent gene product, SV40 Poly A, a second ITR, and a second pUC backbone segment~~in which skeletal muscle exhibits red fluorescence~~.

9. (CANCELED)

10. (CURRENTLY AMENDED) The method of Claim 3, wherein the linearized plasmid is selected from a group consisting of

a ~~first~~ linearized plasmid consisting of, in order, a first pUC backbone segment, a first ITR, an α-actin gene promoter ~~for~~ of golden zebrafish, a gene encoding a red fluorescent gene product, SV40 Poly A, a second ITR, and a second pUC backbone

wherein the first ITR is located at a 5' end of the α-actin gene promoter and the second ITR is located at a 3' end of the SV40 poly A, further wherein the gene encoding a red fluorescent gene product and the gene promoter are operably linked, and further wherein the first and second pUC backbone segments may be cut with *Not*I;

~~and~~

~~a second linearized plasmid consisting of, in order, a first pUC backbone segment, a first ITR, an α-actin gene promoter for golden zebrafish, gene encoding a green fluorescent gene product, SV40 Poly A, a second ITR, and a second pUC backbone segment, wherein the first ITR is located at a 5' end of α-actin gene promoter and the second ITR is located at a 3' end of the SV40 poly A, wherein the gene encoding a green fluorescent gene product and the gene promoter are operably linked, and further wherein the first and second pUC backbone segments may be cut with *Not*I.~~

11. (CURRENTLY AMENDED) The method of Claim 10, wherein:

~~———~~the gene encoding a red fluorescent gene product is DsRed~~; and gene encoding a green fluorescent gene product is EGFP~~.

12. (CURRENTLY AMENDED) The method of Claim 3 wherein the linearized plasmid is selected from a group consisting of

a first linearized plasmid consisting of, in order, a first pUC backbone segment, a first ITR, an α-actin gene promoter capable of activity in~~for~~ golden zebrafish, a gene encoding a red fluorescent gene product, SV40 Poly A, a second ITR, and a second pUC backbone wherein the first ITR is located at a 5' end of the α-actin gene promoter and the

second ITR is located at a 3' end of the SV40 poly A, wherein the gene encoding a red fluorescent gene product and the gene promoter are operably linked, and further wherein the first and second pUC backbone segments may be cut with *Not*I.

13. (CANCELED)

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